

Traditionally trained medical students' perceptions of the World Wide Web as a source of clinical information.

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BACKGROUND. Students on clinical rotation in a teaching hospital with a traditional medical curriculum were given access to computer based information sources including Medline, Scientific American Textbook of Medicine (SAM) and the World Wide Web (WWW) using Netscape 1.2. Resources were accessible from seven Macintosh computers with ATEase interface located on site and linked to the university network. They had exclusive access from 7.00 AM to 9.00 PM, with restricted access from the library at weekends. They were instructed in the use of these resources at the start of their clinical rotations. This study aims to establish the students' views on the value of the WWW by comparison with other information sources, after three to 12 months of free access.

METHODS. (1) Thirty six (18 final year and 18 third year) of 72 students on rotation in the hospital between October '95 and June '96 participated in a medical Objective Structured Clinical Examination (OSCE). It featured six stations with clinical case histories for examination and six stations with response sheets. Students acted as the patients' physician, gathered information from the lecturer presenting the case and formulated management plans recorded on the response sheets. These included a stated clinical problem related to the case. Participants indicated which sources of information they would consult to resolve these problems, selecting from a standard list including textbooks (general medicine, clinical signs and symptoms, clinical pharmacology or pathology); Medline searches (recent editorials, reviews or original articles); a search of WWW pages for relevant, peer reviewed information, and medical colleagues. (2) Twenty four third year students (not in the OSCE group) were assigned to take four Problem Based Learning (PBL) tutorials between April and June 1996 in six groups of four student. One of three medical lecturers presented a case for discussion and oversaw the group dynamics. Questions raised by the students' examination of the cases at each of the first three sessions were researched by students and finding presented at the next session. Case discussion and review of information sources was done at the fourth session. (3) A lecturer searched the WWW commencing at Yahoo to locate reliable sites relevant to a sample of 20 of the questions raised and (4) Fifty students were interviewed about their views on the WWW.

RESULTS

OSCE: Student Choice of information source:

Source	Textbooks	Colleague	Medline	WWW
No. Students	36(100%)	36 (100%)	30 (83%)	9 (25%)

No Significant difference between final and third year students.

PBL groups 1- 6: sources used for problem solving:

	Session 1	Session 2	Session 3
No. Students	24	22*	22*
No. Questions	28	22	22
Used Textbook	18	12	10
Used Medline	4	12	16
Used SAM	1	8	12
Used WWW	0	0	0

*Two students absent

Reasons for not choosing WWW : 1) Uncertainty concerning validity of information retrieved. 2) Perception that information retrieved may not be consistent with local practice. 3) Time required to access useful sites. 4) Information overload due to large return from search queries.

Lecturers search: The lecturer was able to find a useful site within 60 minutes for each of 20 questions.

CONCLUSIONS. The students' demonstrated and expressed avoidance of the WWW appeared to stem mainly from reservations about validity and local applicability of information retrieved rather than difficulties using the system. Both Medline and SAM require training and skill to use and quickly gained popularity. But these are electronic equivalents of familiar and accepted hard-copy sources of information. However, there are clearly many valuable sites on the WWW for clinicians and it is desirable that students learn to use this expansive modern resource.¹ Of note, the concern sometimes expressed, that students might acquire misinformation from open access to the WWW was not realised rather they appeared very conservative in their appraisal of information sources. We suggest that selection and approval of site links by local professional leaders is required before these students will invest the time required to incorporate this tool in an already heavy study schedules.

Reference.

1. Lowe HJ, Lomax EC, Polonkey SE. The World Wide Web: a review of an emerging internet-based technology for the distribution of biomedical information. J Am Med Inform Assoc 1996; 3:1-14.